

**CRYO-COOLED FRONT-END SYSTEM  
WITH MULTIPLE OUTPUTS**

**Abstract of the Disclosure**

A front-end system for receiving signals such as RF signals in a mobile radio communication network includes a cooled vessel such as a cryostat. The cooled vessel includes a manifold that is coupled to the antenna, which separates the various signals received from the antenna. The system

5 includes filters for each signal where such filters are located inside the cooled vessel and may be superconducting. The system may include amplifiers, each of which filters a separate signal from the manifold or may include an amplifier which amplifies the signals before they reach the manifold. The system may also include a wide-band filter which filters the signals prior to

10 amplification or coupling to the manifold.